AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application with the following claims, in which no claim is canceled, withdrawn, currently amended, or newly presented.

1. (Original) A method of minimizing queueing delay of packets in a communication system, the method comprising:

retrieving a search order table having a plurality of table entries corresponding to *M* queues that selectively store the packets, the table entries storing values that correspond to relative positions of the *M* queues and that are selected based upon a transmission constraint of the communication system; and

scheduling transmission of the packets stored in the *M* queues based upon the search order table.

2. (Original) The method according to Claim 1, wherein the transmission constraint in the retrieving step specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, the communication system being a satellite communication system.

3. (Original) The method according to Claim 1, further comprising:

transmitting the packets via *N* number of transmitters, wherein *N* is less than or equal to *M*.

4. (Original) The method according to Claim 3, further comprising:

(a) checking whether a particular one of the *M* queues has a packet stored therein and satisfies the transmission constraint;

(b) selectively including the particular queue in a transmission list based upon the checking step; and

(c) iteratively performing steps (a) and (b) until at least one of each of the *M* queues is checked and *N* number of the queues are included in the transmission list.

5. (Original) The method according to Claim 4, wherein the search order table in the retrieving step has *K* consecutive table entries associated with *K* queues that satisfy the transmission constraint.

6. (Original) The method according to Claim 5, wherein *K* is greater than or equal to *N*.

7. (Original) The method according to Claim 5, wherein the search order table in the retrieving step has *L* consecutive table entries associated with *L* queues that satisfy another transmission constraint.

8. (Original) The method according to Claim 7, wherein the transmission constraint in the retrieving step specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, and the other transmission constraint specifies that only one of the destination nodes selectively requires high-powered transmission.

9. (Original) The method according to Claim 1, further comprising:

inputting repetitive table entry values in the search order table based upon relative traffic load associated with a plurality of destination nodes.

10. (Original) The method according to Claim 1, further comprising:

generating a plurality of search order tables based upon a plurality of power constraints associated with the communication system;

storing the plurality of search order tables; and

selecting a particular one of the plurality of search order tables.

11. (Original) A communication system for minimizing queueing delay of packets, comprising:

M queues configured to store the packets;

a memory storing a search order table having a plurality of table entries corresponding to the *M* queues, the table entries storing values that correspond to relative positions of the *M* queues and that are selected based upon a transmission constraint of the communication system; and

a scheduler coupled to the memory and configured to schedule transmission of the packets stored in the *M* queues based upon the search order table.

12. (Original) The system according to Claim 11, wherein the transmission constraint specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, the communication system being a satellite communication system.

13. (Original) The system according to Claim 11, further comprising:

N number of transmitters configured to transmit the stored packets in the *M* queues, wherein *N* is less than or equal to *M*.

14. (Original) The system according to Claim 13, wherein *N* of the *M* queues that have a packet stored therein and satisfy the transmission constraint are included in a transmission list.

15. (Original) The system according to Claim 14, wherein the search order table has *K* consecutive table entries associated with *K* queues that satisfy the transmission constraint.

16. (Original) The system according to Claim 15, wherein *K* is greater than or equal to *N*.

17. (Original) The system according to Claim 15, wherein the search order table has *L* consecutive table entries associated with *L* queues that satisfy another transmission constraint.

18. (Original) The system according to Claim 17, wherein the transmission constraint specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, and the other transmission constraint specifies that only one or none of the destination nodes requires high-powered transmission.

19. (Original) The system according to Claim 11, wherein the search order table stores repetitive table entry values based upon relative traffic load associated with a plurality of destination nodes.

20. (Original) The system according to Claim 11, further comprising:

a remote database configured to store a plurality of search order tables that created based upon a plurality of power constraints of the communication system.

21. (Original) A switching device, comprising:

a plurality of input ports, each of the input ports being configured to receive a plurality of packets;

a plurality of queues configured to store the plurality of packets;

a memory storing a search order table having a plurality of table entries, the table entries storing values that correspond to relative positions of the plurality of queues and that are selected based upon a transmission constraint, wherein the number of queues is *M*;

a scheduler coupled to the memory and configured to schedule transmission of the packets stored in the queues based upon the search order table; and

a plurality of output ports configured to transmit the stored packets in the plurality of queues based upon the transmission constraint, wherein the stored packets in *N* number of *M* queues are selected for transmission.

22. (Original) The device according to Claim 21, wherein *N* is less than or equal to *M*.

23. (Original) The device according to Claim 22, wherein the search order table has *K* consecutive table entries associated with *K* queues that satisfy the transmission constraint.

24. (Original) The device according to Claim 23, wherein *K* is greater than or equal to N.

25. (Original) The device according to Claim 23, wherein the search order table has *L* consecutive table entries associated with *L* queues that satisfy another transmission constraint.

26. (Original) The device according to Claim 25, wherein the transmission constraint specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, and the other transmission constraint specifies that only of the destination nodes selectively requires high-powered transmission.

27. (Original) The device according to Claim 21, wherein the search order table stores repetitive table entry values based upon relative traffic load associated with a plurality of destination nodes.

28. (Previously Presented) The device according to Claim 21, wherein the search order table stored in the memory is retrieved from a database that stores a plurality of search order tables that are based upon a plurality of power constraints associated with the destination nodes.

29. (Original) A computer-readable medium carrying one or more sequences of one or more instructions for minimizing queueing delay of packets in a communication system, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of:

retrieving a search order table having a plurality of table entries corresponding to *M* queues that selectively store the packets, the table entries storing values that correspond to relative positions of the *M* queues and that are selected based upon a transmission constraint of the communication system; and

scheduling transmission of the packets stored in the *M* queues based upon the search order table.

30. (Original) The computer readable medium according to Claim 29, wherein the transmission constraint in the retrieving step specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, the communication system being a satellite communication system.

31. (Original) The computer readable medium according to Claim 29, further comprising computer-executable instructions for causing the computer system to perform the steps of:

transmitting the packets via *N* number of transmitters, wherein *N* is less than or equal to *M*.

32. (Original) The computer readable medium according to Claim 31, further comprising computer-executable instructions for causing the computer system to perform the steps of:

(a) checking whether a particular one of the *M* queues has a packet stored therein and satisfies the transmission constraint;

(b) selectively including the particular queue in a transmission list based upon the checking step; and

(c) iteratively performing steps (a) and (b) until at least one of each of the *M* queues is checked and *N* number of queues are included in the transmission list.

33. (Original) The computer readable medium according to Claim 32, wherein the search order table in the retrieving step has *K* consecutive table entries associated with *K* queues that satisfy the transmission constraint.

34. (Original) The computer readable medium according to Claim 33, wherein *K* is greater than or equal to *N*.

35. (Original) The computer readable medium according to Claim 33, wherein the search order table in the retrieving step has *L* consecutive table entries associated with *L* queues that satisfy another transmission constraint.

36. (Original) The computer readable medium according to Claim 35, wherein the transmission constraint in the retrieving step specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, and the other transmission constraint specifies that only one of the destination nodes selectively requires high-powered transmission.

37. (Original) The computer readable medium according to Claim 29, further comprising computer-executable instructions for causing the computer system to perform the step of:

inputting repetitive table entry values in the search order table based upon relative traffic load associated with a plurality of destination nodes.

38. (Original) The computer readable medium according to Claim 29, further comprising computer-executable instructions for causing the computer system to perform the steps of:

generating a plurality of search order tables based upon a plurality of power constraints associated with the communication system;

storing the plurality of search order tables; and

selecting a particular one of the plurality of search order tables.

39. (Previously Presented) A method of forwarding packets via a satellite to a plurality of nodes, the method comprising:

scheduling transmission of the packets stored in a plurality of queues based upon a search order table, wherein the search order table has a plurality of table entries corresponding to the queues, the table entries storing values that correspond to relative positions of the queues; and

transmitting the packets to the nodes over one or more satellite links, wherein the stored values in the table are determined according to a transmission constraint relating to the nodes.